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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Koichi Nakata

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EXAMINER

NG, EUNICE

ART UNIT

PAPER NUMBER

2626

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/078,334	Applicant(s) NAKATA, KOICHI	
	Examiner Eunice Ng	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-12, 14, 16, 18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-4 is/are allowed.
- 6) ☒ Claim(s) 1, 5, 7-12, 14, 16, 18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. As a result of the telephone interview on March 15, 2007 with Mr. Naughton, agreement was reached as to claim 14 and, therefore, the finality of the rejection of the last Office action (dated 2/1/07) is withdrawn.
2. Applicants have submitted an Amendment, filed 4/10/07, canceling claims 6, 17 and 19, amending claims 1, 5, 7-10 and 14, without adding new matter, and arguing to traverse claim rejections.

Response to Arguments

3. Applicant's arguments, see Remarks, pp. 7-9, with respect to claims 1, 5 and 14 have been considered but are moot in view of the new ground(s) of rejection, below.
4. Applicant's arguments, see Remarks, pp. 9-10, filed 4/10/07, with respect to the rejection of claim 18 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Feldes *et al.*, US Patent App. Pub. 2003/0091176.

Feldes *et al.* teaches, "Commands and control information can be input by the user via the telephone in spoken form" (paragraph 12), "provide a communication system...permit a customer an acoustic...spoken access...provides graphic and/or textual information" (abstract), "text content of the start page can, so to speak, be 'read' to the user via a telephone...Should the

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number of branch options exceed a predetermined limit value, dialog control device can ensure that the branch options are read to the user in groups [different form], it being easier for the user to remember the branch options in this manner” (paragraph 33).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to record counts of outputs from said speech input guidance unit for the individual speech input executing commands, and if said count for a speech input executing command is more than a predetermined number, the speech input guidance unit provides a guidance output of that command in a form different from that of the other commands, because Feldes *et al.* teaches when there are too many options, there are better ways to assist the user, such as reading the options in groups (different form), to make it easier for the user to remember the options, and thereby reduce user frustration (paragraph 33).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kleeck *et al.* (“Van Kleeck”), US Patent 5,890,122 in view of Au, US Patent 6,778,970.

Regarding claim 14, Van Kleeck teaches a speech input guidance device comprising: a speech input guidance data accumulating (509) unit for recording speech input executing commands (a table of available commands are stored in the input facility and so inherently

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would have been recorded to be stored in said location) categorized by operation object (computer instructions are the device operations while the particular application program constitutes operation object; col. 3, ll. 29-32 and col. 4, ll. 10-23);

a speech input guidance output request detecting unit (502) for detecting a speech input guidance output request from a user (the user activating the facility with an application program constitutes a request for speech guidance output); a data searching unit (502) for searching for and providing data (the process of displaying available commands would inherently require the processor to search the computer memory for available commands corresponding to the particular application program being utilized) in said speech input guidance data accumulating unit according to an output from said speech input guidance output request detecting unit; and a speech input guidance output unit (speech synthesizer; display) for providing speech input executing commands searched by said data searching unit as one of by a display screen and by speech (col. 4, ll. 10-23 and ll. 34-44 and col. 7, ll. 44-48);

wherein said speech input guidance data accumulating unit (509) records (a hierarchy table of available commands for each application is stored in the input facility and so inherently would have been recorded to be stored in said location) speech input executing commands for indicating an operation object (card node) and commands for a speech input for indicating the content of an operation (children nodes) applied to the operation object and when said speech input guidance output request detecting unit (502) detects (spoken command is recognized) that a user enters only one of said speech input executing command for indicating an operation object and said speech input executing command for indicating an operation content, said data searching unit (502) searches for and provides (the interface searches for and displays all of the

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children nodes corresponding to the recognized command as the new list of active words) either a speech input executing command for indicating an operation object corresponding to an operation content entered by the user, or a speech input executing command for indicating an operation content corresponding to an operation object entered by the user (col. 5, ll. 10-24 and col. 6, ll. 6-63).

Van Kleeck does not explicitly teach both possibilities of: said data searching unit searches for and provides a speech input executing command for indicating an operation object corresponding to an operation content entered by the user when only an operation content is entered by the user without indicating an operation object *and* provides a speech input executing command for indicating an operation content corresponding to an operation object entered by the user when only an operation object is entered by the user without indicating an operation content. However, this feature would have been obvious given the teaching elements of Au, which teaches topological methods to organize semantic network data flows for conversational applications. Au teaches that all human language grammars are composed from objects, subjects and verbs; most languages have SVO [subject-verb-object] or SOV [subject-object-verb] order (col. 56, ll. 32-45), suggesting receiving keywords in different order.

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching elements of Van Kleeck with Au to include providing a speech input executing command for indicating an operation content [e.g. volume, temperature] corresponding to an operation object [e.g., up, down] entered by the user when only an operation object [e.g. up, down (verbs)] is entered by the user without indicating an operation content [e.g. volume, temperature (objects)] in order to facilitate languages which have SVO

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[subject-verb-object] order. The dictionary may be used for languages with various object, subject and verb ordering by changing the ordering rule used by the parser, as described by Au in col. 58, ll. 37-40.

Regarding claim 20, Van Kleeck teaches a speech input guidance device comprising: a speech input executing command indicating means for specifying one of the speech input executing commands (active words) provided on the screen from said speech input guidance output unit (505; col. 4, ll. 63-66); and

a device operation means for conducting an operation (keystroke commands) specified by said speech input executing command indicating means (col. 4, line 66 through col. 5, line 7).

7. Claims 1, 5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kleeck et al. ("Kleeck"), US Patent 5,890,122 in view of Davis et al. ("Davis"), US Patent 5,177,685.

Regarding claim 1, Van Kleeck teaches: detecting a device operation by a user (the process of activating the facility would inherently require the computer to detect keystrokes or mouse clicks; col. 4, ll. 24-25); and searching (the process of displaying available commands would inherently require the processor to search the computer memory for available commands corresponding to the particular application program being utilized) for a speech input executing command (available commands) corresponding to the device operation from a speech input guidance data accumulating unit (504).

Van Kleeck does not, but Davis suggests detecting whether an audio or image output of an operated device is occurring; and providing the user with the searched speech input guidance if it would not interfere with an audio or image output of an operated device, but not providing the user with the searched speech input guidance if it would interfere with an audio or image output of an operated device (col. 22, line 56 – col. 23, line 5, teaches “Back Seat Driver... integrated into the car’s audio system...it should pay attention to what the driver is listening to [detecting audio output occurring]... If the driver is listening to the radio, or playing a CD...the program should try to speak [provide guidance] less often, on the grounds that the driver has implicitly indicated a preference for what to listen to...suppress...notes altogether”; Abstract).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching elements of Van Kleeck with Davis because Davis teaches that the user may be implicitly indicating his/her preference for what to listen to (col. 22, ll. 59-63), so giving priority to the audio output already occurring would allow the user to enjoy the music/audio output without interruption, and at the same time avoid confusing the user with simultaneous prompts and music.

Regarding claim 5, Van Kleeck teaches: a device operation detecting unit for detecting a device operation by a user (col. 4, ll. 10-15 and ll. 24-25);

a speech input guidance data accumulating unit (509) for recording speech input guidance data (a table of available commands are stored in the input facility and so inherently would have been recorded to be stored in said location) for guiding the user to a command to be executed by means of speech for device operations categorized by device operation type (computer

instructions are the device operations while the particular application program constitutes operation type; col. 3, ll. 29-32 and col. 4, ll. 10-23); and

a data searching unit (502) for searching for (the process of displaying available commands would inherently require the processor to search the computer memory for available commands corresponding to the particular application program being utilized), and providing (displaying) speech input guidance data corresponding to, the device operation detected by said device operation detecting unit from said speech input guidance data accumulating unit; and a speech input guidance output unit (505) for providing the user with data searched by said data searching unit (col. 4, ll. 10-23 and ll. 34-44).

The remaining limitations of claim 5 are similar to that of claim 1, above, and is rejection for the same rationale.

Regarding claims 7, 8 and 10, Van Kleeck fails to disclose a speech input guidance controlling unit for stopping/preventing the speech input guidance when the operation of a device (e.g. device for providing audio output, a radio, route guidance by speech of a navigation device) is detected. However, this feature would have been obvious given the teaching elements of Davis in col. 22, line 56 – col. 23, line 5, which teaches “Back Seat Driver...integrated into the car’s audio system...it should pay attention to what the driver is listening to [e.g. radio, route guidance]...suppress...When it must speak, it should borrow the audio channel rather than trying to speak over it.”

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching elements of Van Kleeck with Davis because Davis

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teaches that the user may be implicitly indicating his/her preference for what to listen to (col. 22, ll. 59-63), so giving priority to the output already occurring would allow the user to enjoy or focus on the current operation without interruption, and avoid confusing the user with simultaneous prompts and music.

Regarding claim 9, Van Kleeck teaches wherein at least one of guidance with a screen and a confirmation sound for indicating that a speech input is available is provided when the speech input guidance is stopped/prevented (the guidance data is provided to a screen display when made available and also goes into a wait state; col. 4, ll. 34-40 teaches, “the interface program displays in an active words window a list of active words that the user may speak in order to input currently appropriate choices” and col. 4, line 57 through col. 5, line 9, teaches “the user speaks a word into the microphone, the interface program receives a digitized representation of the spoken word from the sound input module... The interface program then communicates the choice associated with the recognized word to the application program. In a preferred embodiment, the interface program accomplishes this by submitting keystroke commands corresponding to the choice associated with the recognized word to the application program [for example, a stop command]. When the application receives these keystrokes, it acts upon the choice to which the keystrokes correspond. The interface program then updates the list of active words in light of the new currently appropriate choices [guidance with a screen for indicating that a speech input is available] and waits for the user to speak another word”).

8. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kleeck in view of Davis, and further in view of Cohen et al., US Patent No. 6,560,576.

Regarding claims 11-12, Van Kleeck and Davis fail to teach recording a count of the outputs. However, Cohen teaches a data recording unit for recording counts of the guidance speech outputs (played prompts) and of the guidance screen display outputs (prompts) separately (Examiner takes the position that recorded counts would be made separate since the data correlates to two different interfaces) characterized by the device operation type (prompt specific conditions) from said speech input guidance unit (23) into the speech input guidance data accumulating unit (22), wherein said speech input guidance controlling unit (21) uses the data searching unit to search for/receive a count of outputs corresponding to a device operation, and stops the speech input guidance when said count of outputs exceeds a predetermined number (Fig. 2; col. 9, ll. 8-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to supplement Van Kleeck's and Davis' speech input guidance device with Cohen's recording output counts. The motivation for doing so would have been to allow experienced users benefit from learning to use a system more efficiently by eliminating the superfluous repeating of prompts as taught by Cohen (col. 6, ll. 8-10).

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kleeck, Davis, and Cohen et al. in view of Feldes et al., US Patent App. Pub. 2003/0091176.

Regarding claim 18, Van Kleeck teaches a speech input guidance data accumulating unit (509) for recording speech input executing commands (a table of available commands are stored

in the input facility and so inherently would have been recorded to be stored in said location) characterized by operation object (computer instructions are the device operations while the particular application program constitutes operation object; col. 3, ll. 29-32 and col. 4, ll. 10-23);

a speech input guidance output request detecting unit (502) for detecting a speech input guidance output request from a user (the user activating the facility with an application program constitutes a request for speech guidance output);

a data searching unit (502) for searching for and providing data (the process of displaying available commands would inherently require the processor to search the computer memory for available commands corresponding to the particular application program being utilized) in said speech input guidance data accumulating unit according to an output from said speech input guidance output request detecting unit; and

a speech input guidance output unit (speech synthesizer; display) for providing speech input executing commands searched by said data searching unit as one of by a display screen and by speech (col. 4, ll. 10-23 and ll. 34-44 and col. 7, ll. 44-48).

Van Kleeck, Davis, and Cohen do not explicitly teach the speech input guidance output unit provides a guidance output of the command in a form different from that of the other commands when the count for a speech input executing command is more than a predetermined number. However, Feldes *et al.* teaches, "Commands and control information can be input by the user via the telephone in spoken form" (paragraph 12), "provide a communication system...permit a customer an acoustic...spoken access...provides graphic and/or textual information" (abstract), "text content of the start page can, so to speak, be 'read' to the user via a telephone...Should the number of branch options exceed a predetermined limit value, dialog

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control device can ensure that the branch options are read to the user in groups [different form], it being easier for the user to remember the branch options in this manner” (paragraph 33).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to record counts of outputs from said speech input guidance unit for the individual speech input executing commands, and if said count for a speech input executing command is more than a predetermined number, the speech input guidance unit provides a guidance output of that command in a form different from that of the other commands, because Feldes *et al.* teaches when there are too many options, there are better ways to assist the user, such as reading the options in groups (different form), to make it easier for the user to remember the options, and thereby reduce user frustration (paragraph 33).

The rest of the limitations of claim 18 are the same as or similar to those of claim 11, rejected above, and thus are rejected for the same reasons.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kleeck and Au in view of White, US Patent No. 5,386,494.

Van Kleeck teaches recording speech input executing commands into a speech input guidance data accumulating unit, but fails to disclose of providing paraphrased speech input executing commands. Van Kleeck and Au do not, however White teaches recording speech input executing commands for paraphrasing the individual speech input executing commands, and the speech input guidance output unit provides paraphrasing speech input executing commands corresponding (associated) to an entered speech input executing command (Fig. 5C; col. 8, ll. 43-54).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to supplement Van Kleeck's speech input guidance device and Au with White's paraphrasing of commands. The motivation for doing so would have been to allow the user to easily check whether the computer has the capability to recognize the context of a spoken command, as taught by White (col. 8, ll. 48-51).

Allowable Subject Matter

11. Claims 2-4 are allowable. The following is a statement of reasons for the indication of allowable subject matter: Claim 2 is allowable because the prior art of record does not disclose or suggest of a speech input guidance device wherein the number of speech inputs is counted and guidance is terminated when the count of speech inputs exceeds a predetermined number. It is old and well known in prior art to terminate guidance when the number of speech outputs exceeds a predetermined number (see e.g. Cohen). However, the prior art does not disclose or suggest terminating the guidance according to the counts of the speech input. Claims 3-4 depend from independent claim 2 and therefore are also deemed allowable.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 5,860,069 (Aust et al.), transaction system based on a bidirectional speech channel by status graph building and problem detection for a human user.

US 6,192,343 (Morgan et al.), speech command input recognition system for interactive computer display with term weighting means used in interpreting potential commands from relevant speech terms.

US 6,285,924 (Okamoto et al.), on-vehicle input and output apparatus.

US 4,723,921 (Koike), voice generating device generates a voice message corresponding to only the highest priority output signal.

US 6,208,932 (Ohmura et al.), navigation apparatus selects information having a high priority in accordance with a predetermined priority and offers the selected information to the driver in the selected order.

US 6,266,614 (Alumbaugh), travel guide.

US 5,729,659 (Potter), controlling a digital computer using oral input.

US 5,101,357 (Tempelhof), navigation data storage on compact disk, minimizes disturbing interruptions of the playing of music or other audio selections.

JP 2001-116581 (Kusano), navigation system, when low priority interruption signal is output, the control unit outputs guidance data between music.

EP 1254039 (Cull), method and device for controlling voice output in a motor vehicle.

JP 10-104010 (Omura et al.), navigation apparatus, when a piece of music is started, information is not provided until the piece of music is finished.

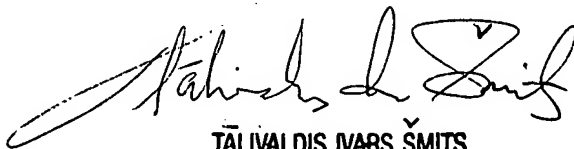
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eunice Ng whose telephone number is 571-272-2854. The examiner can normally be reached on Monday through Friday, 8:30 a.m. - 5:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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PRIMARY EXAMINER